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Substitute for form 1449/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 3

**Complete if Known**

Application Number	10/656,369
Filing Date	08 September 2003
First Named Inventor	Vitalii Silin
Art Unit	1641
Examiner Name	Nelson Yang

Attorney Docket Number

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
1	US- 4,071,409		Jan., 1978	Messing et al.	195/63
2	US- 4,562,157		Dec., 1985	Lowe et al.	435/291
3	US- 4,690,715		Sep., 1987	Allara et al.	148/6
4	US- 4,908,112		Mar., 1990	Pace	204/299
5	US- 4,973,493		Nov., 1990	Guire	427/2
6	US- 4,987,032		Jan., 1991	Miyasaka et al.	
6	US- 5,079,600		Jan., 1992	Schnur et al.	357/4
7	US- 5,096,807		Mar., 1992	Leaback	435/6
8	US- 5,143,854		Sep., 1992	Pirrung et al.	438/518
9	US- 5,154,808		Oct., 1992	Miyasaka et al.	
10	US- 5,160,597		Nov., 1992	Colapicchioni et al	204/403
11	US- 5,242,828		Sep., 1993	Bergstrom et al.	435/291
12	US- 5,252,743		Oct., 1993	Barrett et al	548/303
13	US- 5,294,369		Mar., 1994	Shigekawa et al.	252/313.
14	US- 5,304,487		Apr., 1994	Wilding et al.	428/420.
15	US- 5,342,692		Aug., 1994	Ribi	
16	US- 5,384,261		Jan., 1995	Winkler et al.	436/518
17	US- 5,405,766		Apr., 1995	Kallury et al.	
18	US- 5,405,783		Apr., 1995	Pirrung et al.	436/518

**FOREIGN PATENT DOCUMENTS**

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		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				
1	WO9850773		Nov., 1994	WO.		
2	WO9535505		Dec., 1995	WO.		
3	WO 96/02830		Feb., 1996	WO.		
4	WO 96/10178		Apr., 1996	WO.		
5	WO 96/26432		Aug., 1996	WO.		
6	WO 96/29629		Sep., 1996	WO.		

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PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031  
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Substitute for form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)		Application Number	10/656,369
Sheet	2	Filing Date	08 September 2003
	of 3	First Named Inventor	Vitalii Silin
		Art Unit	1641
		Examiner Name	Nelson Yangf
		Attorney Docket Number	

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19	US- 5,412,087		May., 1995	McGall et al.	536/24.
20	US- 5,429,708		Jul., 1995	Linford et al.	216/66
21	US- 5,445,934		Aug., 1995	Fodor et al.	435/6
22	US- 5,472,881		Dec., 1995	Beebe et al.	436/94
23	US- 5,510,270		Apr., 1996	Fodor et al.	436/518
24	US- 5,512,131		Apr., 1996	Kumar et al.	156/655
25	US- 5,512,492		Apr., 1996	Herron et al.	436/518.
26	US- 5,514,501		May., 1996	Tarlov	430/5.
27	US- 5,520,787		May., 1996	Hanagan et al.	204/409
28	US- 5,571,410		Nov., 1996	Swedberg et al.	210/198
29	US- 5,593,838		Jan., 1997	Zanzucchi et al.	435/6
30	US- 5,603,351		Feb., 1997	Cherukuri et al	137/597
31	US- 5,605,662		Feb., 1997	Heller et al.	422/68
32	US- 5,620,850		Apr., 1997	Bamdad et al.	530/300
33	US- 5,622,826		Apr., 1997	Varma	435/6
34	US- 5,624,711		Apr., 1997	Sundberg et al.	427/261.
35	US- 5,629,213		May., 1997	Kornguth et al.	436/518
36	US- 5,635,358		Jun., 1997	Wilding et al.	435/7
37	US- 5,637,469		Jun., 1997	Wilding et al.	435/7

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7	WO 96/38726		Dec., 1996	WO.	
8	WO 96/39937		Dec., 1996	WO.	
9	WO 97/07429		Feb., 1997	WO.	
10	WO 97/36681		Oct., 1997	WO.	
12	WO 97/41424		Nov., 1997	WO.	
13	WO 97/41425		Nov., 1997	WO.	

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38	US- 5,677,195		Oct., 1997	Winkler et al.	436/518
39	US- 5,677,196		Oct., 1997	Herron et al.	436/518.
40	US- 5,681,484		Oct., 1997	Zanzucchi et al.	216/2.
41	US- 5,688,642		Nov., 1997	Chrisey et al.	435/6
42	US- 5,700,642		Dec., 1997	Monforte et al.	435/6
43	US- 5,719,060		Feb., 1998	Hutchens et al	436/174
44	US- 5,726,026		Mar., 1998	Wilding et al.	
45	US- 5,731,152		Mar., 1998	Maracas et al.	3/98
46	US- 5,744,305		Apr., 1998	Fodor et al.	435/6
47	US- 5,776,674		Jul., 1998	Ulmer	
48	US- 5,837,832		Nov., 1998	Chee et al	536/22
49	US- 5,861,242		Jan., 1999	Chee et al.	435/5
50	US- 5,866,345		Feb., 1999	Wilding et al.	
51	US- 5,925,552		Jul., 1999	Keogh et al.	
52	US- 5,928,880		Jul., 1999	Wilding et al.	
53	US- 6,329,209		Dec. 2001	Wagner et al.	436/518
54	US- 6,365,418		Apr. 2002	Wagner et al.	436/518
55	US- 6,406,921		Jun, 2002	Wagner et al.	
	US-				

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14	WO9823948		Jun., 1998	WO.		
	WO9839481		Sep., 1998	WO.		

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		SIGAL et al. (1996). A self-assembled monolayer for the binding and study of histidine-tagged proteins by surface plasmon resonance. <i>Anal. Chem.</i> 68:490-497.*			
		NOCK et al. (1997). Reversible, site-specific immobilization of polyarginine-tagged fusion proteins on mica surfaces. <i>FEBS Letters.</i> 414:233-238.*			
		MARKS et al. (1991). By-passing immunization--Human antibodies from V-gene libraries displayed on phage. <i>J. Mol. Biol.</i> 222:581-597.*			
		ROWE et al. (1999). Array biosensor for simultaneous identification of bacterial, viral and protein analytes. <i>Anal. Chem.</i> 71(17):3846-3852.*			
		DZGOEV et al. (1996). Microformat imaging ELISA for pesticide determination. <i>Anal. Chem.</i> 68(19):3364-3369.*			
		JONES et al. (1998). Microminiaturized immunoassays using atomic force microscopy and compositionally patterned antigen arrays. <i>Anal. Chem.</i> 70(7):1223-1241.*			
		COLLILOUD et al. (1993). Oriented and covalent immobilization of target molecules to solid supports: Synthesis and application of a light-activatable and thiol-reactive cross-l			
		ELKINS et al. (1991). Multianalyte microspot immunoassay-microanalytical "compact disk" of the future. <i>Clin. Chem.</i> 37(11):1955-1967.*			
		KRICKA (1998). Miniaturization of analytical systems. <i>Clin. Chem.</i> 44(9):2008-2014.* Ekins (1998). Ligand assays: from electrophoresis to miniaturized microarrays. <i>Clin. Chem.</i>			
		SILZEL et al. (1998). Mass-sensing, multianalyte microarray immunoassay with imaging detection. <i>Clin. Chem.</i> 44(9):2036-2043.*			

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		NIEMEYER et al. (1994). Oligonucleotide-directed self-assembly of proteins: semisyntetic DNA -streptavidin hybrid molecules as connectors for the generation of macroscopic arrays.	
		NIEMEYER et al. (1999). DNA-directed immobilization: efficient, reversible, and site-selective surface binding of proteins by means of covalent DNA-streptavidin conjugates. <i>Anal.</i>	
		NIEMEYER et al. (1999). Functionalization of covalent DNA-streptavidin conjugates by means of biotinilated modulator components. <i>Bioconjugate Chem.</i> 10:708-719.*	
		NIEMEYER et al. Self-assembly of DNA-streptavidin nanostructures and their use as reagents in immuno-PCR. <i>Nucleic Acid Research</i> 27(23):4553-4561 (1999).	
		NIEMEYER et al. Hybridization characteristics of biomolecular adaptors, covalent DNA-streptavidin conjugates. <i>Bioconjugate Chem.</i> 9:168-175 (1998).	
		WANG et al. Peptide nucleic acid probes for sequence-specific DNA biosensors. <i>J.Am.Chem.Soc.</i> 118:7667-7670 (1996).	
		NIELSEN P.E. Application of peptide nucleic acids. <i>Current Opinions in biotechnology</i> , 10:71-75 (1999).	
		ARLINGHAUS et al. Analysis of biosensor chips for identification of nucleic acids. <i>Anal.Chem.</i> 69:3747-3753 (1997).	
		LEMMO et al.: "Characterization of inkjet chemical microdispenser for combinatorial library synthesis", <i>Anal. Chem.</i> 69: 543-551 (1997).	
		STEINNICKE et al. "Biochemical characteristics of caspases-3, -6, -7, and -8" <i>J. Biol. Chem.</i> 272: 25719-25723 (1997).	

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		TALANAIN et al. "Substrate specialities of capsases family proteases" J. Biol. Chem. 272: 9677-9682 (1997).			
		THORNBERRY: "Interleukin-1beta converting enzyme" Meth. Enzymology 244: 615-631 (1994).			
		VILLA et al. "Caspases and caspase inhibitors" TIBS 22: 388-393 (1997).			
		KEMENY: "Enzyme-linked immunoassays" in Immuno Chemistry 1 (eds Johnstone and Turner) p 147-175 (Nov. 1997).			
		MAURACHER et al. "Reduction of rubella ELISA background using heat denatured sample buffer" J. Immun. Meth. 145:251-254 (1991).			
		PALE-GROSDEMANGE et al.: "Formation of self-assembled monolayers by chemisorption of derivatives of oligo(ethylene glycol) of structure HS(CH <sub>2</sub> ) <sub>11</sub> (OCH <sub>2</sub> CH <sub>2</sub> ) <sub>m</sub> OH on gold" J. Am.			
		PHAM, et al. "Human Interleukin-2 Production in Insect (Trichoplusia ni) Larvae: Effects and Partial Control of Proteolysis", Biotechnology and Bioengineering vol. 62(2) pp. 1			
		BECKER et al., "Fabrication of microstructures with high aspect ratios and great structural heights by synchrotron radiation lithography, galvanoforming, and plastic moulding			
		BECKER et al., "Production of separation-nozzle systems for uranium enrichment by a combination of x-ray lithography and galvanoplastics," Naturwissenschaften, 69:520-523 (198			
		CLOAD et al., "Development of improved tRNAs for in vitro biosynthesis of proteins containing unnatural amino acids," Chemistry & Biology 3:1033-1038 (1996).			

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		CONDRA et al., "In vivo emergence of HIV-1 variants resistant to multiple protease inhibitors," Nature, 374:569-571 (1995).			
		DAMMER et al., "Specific antigen/antibody interactions measured by force microscopy," Biophysical Journal, 70:2437-2441 (1996).			
		DAWSON et al., "Peptide-derived self-assembled monolayers: adsorption of N-stearoyl L-Cysteine Methyl Ester on Gold," Journal of Molecular Recognition, 10:18-25 (1997).			
		DUSCHL et al., "Surface engineering: optimization of antigen presentation in self-assembled monolayers," Biophysical Journal, 70:1985-1995 (1996).			
		ELLMAN et al., "Biosynthetic method for introducing unnatural amino acids site-specifically into proteins," Methods in Enzymology, 202:301-336 (1991).			
		GEOGHEGAN et al., "Fluorescence-based continuous assay for the aspartyl protease of human immunodeficiency virus-1," FEBS, 262:119-122 (1990).			
		HEGNER et al., "Ultralarge atomically flat template-stripped Au surfaces for scanning probe microscopy," Surface Science, 291:39-46 (1993).			
		HEGNER et al., "Immobilizing DNA on gold via thiol modification for atomic force microscopy imaging in buffer solutions," FEBS, 336(3):452-456 (1993).			
		HEGNER et al., "Modified DNA immobilized on bioreactive self-assembled monolayer on gold for dynamic force microscopy imaging in aqueous buffer solution," J. Vac. Sci. Technol.			
		HO et al., "Characterization of human immunodeficiency virus type 1 variants with increased resistance to a C.sub.2 -symmetric protease inhibitor," Journal of Virology, 68:201			

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	10/656,369
Sheet	5	of	7	Filing Date	08 September 2003
				First Named Inventor	Vitalii Silin
				Art Unit	1641
				Examiner Name	Nelson Yang
				Attorney Docket Number	

<b>NON PATENT LITERATURE DOCUMENTS</b>			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		HOCHULI et al., "Genetic approach to facilitate purification of recombinant proteins with a novel metal chelate adsorbent," Biotechnology, 6:1321-1325 (1988).	
		KAPLAN et al., "Selection of multiple human immunodeficiency virus type 1 variants that encode viral proteases with decreased sensitivity to an inhibitor of the viral protease	
		KORANT et al., "The HIV protease and therapies for aids," Advances in Experimental Medicine and Biology, 421:279-284 (1997).	
		LINFORD et al., "Alkyl monolayers on silicon prepared from 1-alkenes and hydrogen-terminated silicon," J. Am. Chem. Soc., 117:3145-3155 (1995).	
		LOEB et al., "Complete mutagenesis of the HIV-1 protease," Nature, 340:397-400 (1989).	
		LOUIS et al., "Autoprocessing of the HIV-1 protease using purified wild-type and mutated fusion proteins expressed at high levels in Escherichia coli," Eur. J. Biochem., 199:3	
		MRKSICH et al., "Controlling cell attachment on contoured surfaces with self-assembled monolayers of alkanethiolates on gold," Proc. Natl. Acad. Sci. USA, 93:10775-10778 (1996)	
		MOORE et al., "Peptide substrates and inhibitors of the HIV-1 protease," Biochemical and Biophysical Research Communications, 159:420-425 (1989).	
		NOCK, "Reversible, site-specific immobilization of polyarginine-tagged fusion proteins on mica surfaces," FEBS, 414:233-238 (1997).	
		NOREN et al., "A general method for site-specific incorporation of unnatural amino acids into proteins," Science, 244:182-188 (1989).	

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		PRIME et al., "Self-assembled organic monolayers: model systems for studying absorption of proteins at surfaces," <i>Science</i> , 252:1164-1167 (1991).			
		ROBERTS et al., "Rational design of peptide-based HIV proteinase inhibitors," <i>Science</i> , 248:358-361 (1990).			
		SCHOCK et al., "Mutational anatomy of an HIV-1 protease variant conferring cross-resistance to protease inhibitors in clinical trials," <i>The Journal of Biological Chemistry</i> , 27			
		SINGHVI et al., "Engineering cell shape and function," <i>Science</i> , 264:696-698 (1994).			
		SKALKA, "Retroviral proteases: first glimpses at the anatomy of a processing machine," <i>Cell</i> , 56:911-913 (1989).			
		SUNDBERG et al., "Spatially-addressable immobilization of macromolecules on solid supports," <i>J. Am. Chem. Soc.</i> 117:12050-12057 (1995).			
		WAGNER et al., ".omega.-functionalized self-assembled monolayers chemisorbed on ultraflat Au(111) surfaces for biological scanning probe microscopy in aqueous buffers," <i>J. Vac</i>			
		WAGNER et al., "Formation and in Situ modification of monolayers chemisorbed on ultraflat template-stripped gold surfaces," <i>Langmuir</i> , 11(10):3867-3875 (1995).			
		WAGNER et al., "Bioreactive self-assembled monolayers on hydrogen-passivated Si(111) as a new class of atomically flat substrates for biological scanning probe microscopy," <i>Jo</i>			
		WAGNER et al., "Covalent immobilization of native biomolecules onto Au(111) via N-hydroxysuccinimide ester functionalized self-assembled monolayers for scanning probe microsc			

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